INDEX.

Abrams, D. A.
Effect of Time of Mixing on the Strength and Wear of Concrete, 22.
Discussion, 93, 191.

Aggregate.
Tests of Blast Furnace Slag as the Coarse Aggregate in Concrete. P. J, Freeman, 95.

Aldrich, R. C.
Discussion, 93, 291.

Allen, Leslie H.
Labor Turnover and its Relation to Industrial Housing, 389.

Barges.
See **Ships.**

Bates, P. H.
Discussion, 108.

Board of Direction.
Abstract of Minutes of Meetings, 578.
Annual Report, 575,

Boyer, E. D.
Discussion, 124.

Brazer, G. H.
Reinforced-Concrete Cold Storage Warehouse at Boston, Mass., 292.

Bridges.
Reinforced-Concrete Flat-Slab Railway Bridges, A. B. Cohen, 321.
Report of Committee on Concrete Highway Bridges and Culverts, 568.

Bromley, A. H., Jr.
Core Construction for Reinforced-Concrete Floors, 303.
Discussion, 311.

Buildings.
Economy in the Design of Concrete Buildings. C. W. Mayers, 336.
Report of the Committee on Reinforced-Concrete and Building Laws, 481.

Chapman, C. M.
Discussion, 136.

Chimneys.
Design of Reinforced-Concrete Chimneys. J. G. Mingle, 278.

Cohen, A. B.
Reinforced-Concrete Flat-Slab Railway Bridges, 321.

Cold Storage Buildings.
Reinforced-Concrete Cold Storage Warehouse at Boston, Mass. G. H. Brazer, 292.

Columns.
Fire Tests of Concrete Columns. W. A. Hull, 138.

Concrete Finish.
Some Problems in Devising a New Finish for Concrete. J. J. Earley, 127.

Concrete Mixing.
Effect of Time of Mixing on the Strength and Wear of Concrete. D. A. Abrams, 22.

Concrete Products.
Factory-made Reinforced-Concrete Products for Railway Purposes. Charles Gilman, 250.
Ornamental and Decorative Concrete. R. F. Havlik, 240.
Reinforced-Concrete Pressure Pipe. Coleman Meriwether, 265.
Report of the Committee on Building Blocks, 476.

Concrete Surfaces.
Some Problems in Devising a New Finish for Concrete. J. J. Earley, 127.
Report of the Committee on Concrete Surfaces, 466.
Tests of Stucco. J. C. Pearson, 109.

Conzelman, John E.
Advantages and Disadvantages of the Concrete House, 392.

Costs.
Economy in the Design of Concrete Buildings. C. W. Mayers, 336,

Culverts.
See **Bridges.**

Decorative Concrete.
Ornamental and Decorative Concrete. R. K. Havlik, 240.
Report of the Committee on Concrete Surfaces, 466.
Some Problems in Devising a New Finish for Concrete. J. J. Earley, 127.

Earley, John J.
Some Problems in Devising a New Finish for Concrete, 127.
Discussion, 136.

Eaton, G. S.
Concrete Roadways for Industrial Plants, 356.

Factories.
Problems in Designing a Concrete Factory. N. M. Loney, 317.

Fire Protection.
Fire Tests of Concrete Columns. W. A. Hull, 138.
Proposed Standard Specifications for Fire Tests of Materials and Construction, 569.

Flat Slabs.
Moment Coefficients for Flat-Slab Design. W. K. Hatt, 164.
Reinforced-Concrete Flat-Slab Bridges. A. B. Cohen, 321.
Test of the S-M-I System of Flat-Slab Construction. Edward Smulski, 206.
Test of an Eight-year-old Flat Slab. A. N. Talbot and H. F. Gonnerman, 192.

Floors.
Core Construction for Reinforced-Concrete Floors. A. H. Bromley, Jr., 303.

Freeman, J. E.
Developments in Concrete Barges and Ships, 422.

Freeman, P. J.
Tests of Blast-Furnace Slag as Coarse Aggregate, 95.

Gilbert, C. D.
The Concrete House, 398.

Gilman, Charles.
Factory-made Reinforced-Concrete Products for Railway Purposes, 250.

Godfrey, Edward.
Discussion, 204, 290, 310.

Gonnerman, Harrison F.
Some Tests on Age and Strength of Concrete, 101.
Tests of an Eight-year-old Flat Slab, 192.

Grain Elevator.
The C. & N. W. Ry. Co. Terminal Elevator. F. C. Huffman, 312.

Hasse, O. C.
Discussion, 136.

Hatt, W. K.
Moment Coefficients for Flat-Slab Design with Results of a Test, 164.
Discussion, 93, 124, 137, 191, 233, 311, 335.

Havlik, R. F.
Ornamental and Decorative Concrete, 240.

Hollister, S. C.
Problems in Arising in the Design and Construction of a Reinforced-Concrete Ship, 441.

Hough, N. G.
Discussion, 125.

Housing.
Advantages and Disadvantages of the Concrete House. J. E. Conzelman, 392.
Architectural Details of the Concrete House. E. G. Perrot, 416.
The Concrete Industrial House. C. D. Gilbert, 398.
Interior Construction of the Industrial House. M. D. Morrill, 419.
Labor Turnover and its Relation to Industrial Housing. L. H. Allen, 389.
Methods of Constructing Concrete Houses. K. H. Talbot, 408.
Report of the Committee on Concrete Industrial Houses, 482.

Huffman, F. C.
The C. & N. W. Ry. Co. Terminal Elevator, 312.

Hull, W. A.
Fire Tests of Concrete Columns, 138.

Hunter, A. H.
How to get the Best Surface on a Concrete Road, 374.

Johnson, A.N.
Superelevation of Curves on Concrete Highways, 386.

Lesley, Robert W.
Discussion, 124.

Lindau, A. E.
Discussion, 233.

Livingston, L. L.
Design and Construction of a Concrete Barge, 433.

Loney, N. M.
Problems in Designing a Concrete Factory, 317.

Lowell, John W.
An Investigation of the Vertical Movements of Concrete Pavements, 366.
Discussion, 290.

Martin, E. S.
Discussion, 190, 335.

McArdle, P. C.
Some Experiences on the Vermilion County Concrete Roads, 380.

Mayers, Clayton W.
Economy in the Design of Concrete Buildings, 336,

Mensch, L. J.
Discussion, 355.

Meriwether, Coleman.
Reinforced-Concrete Pressure Pipe, 265.

Mingle, J. G.
Reinforced-Concrete Chimneys, 278.
Discussion, 290, 291.

Mixing, Time of
Effect of Time of Mixing, etc. D. A. Abrams, 22.

Monks, Archibald G.
The Yard for Building Concrete Ships at Wilmington, N. C., 428.

Morrill, Milton Dana.
Interior Construction of the Industrial House, 419.

Nomenclature, Committee on.
Report, 504.

Pavements.
See **Roads and Pavements.**

Pearson, J. C.
Tests of Stucco, 107.
Discussion, 124, 125, 126,

Perrot, Emile G.
Architectural Details of the Concrete House, 416.
Discussion, 126.

Pipe.
Reinforced-Concrete Pressure Pipe. C. Meriwether, 265.

Railways.
Factory-made Reinforced Concrete Products for Railway Purposes. C. Gilman, 250.
Reinforced-Concrete Flat-Slab Railway Bridges. A. B. Cohen, 312,

Roads and Pavements.
Concrete Roadways for the Industrial Plant. G. S. Eaton, 356.
How to get the Best Surface on a Concrete Roadway. A. H. Hunter, 374.
Investigation of the Vertical Movements of Concrete Pavements. J. W. Lowell, 366.
Proposed Standard Specifications for Concrete Sidewalks and Floors, 489.
Recommended Practice for Concrete Roads and Street Maintenance, 518.
Report of the Committee on Concrete Roads and Pavements, 517.
Some Experiences on the Vermilion Country Concrete Roads. P. C. McArdle, 380,
Standard Specifications for Roads, 573.
Superelevation of Curves on Concrete Highways. A. N. Johnson, 386,

Scofield, H. H.
An Apparatus for the Application of a Uniformly Distributed Loading, 234.

Shainwald, Ralph L.
Discussion, 290.

Ships.
Design and Construction of a Reinforced-Concrete Barge. L. L. Livingston, 433.
Developments in Concrete Barges and Ships. J, E. Freeman, 422,
Problems Arising in the Design and Construction of Reinforced Concrete Ships. R. J. Wig and S. C. Hollister, 441.
Report of the Joint Committee on Concrete Ships, 505.
Yard for Building Concrete Ships at Wilmington, N. C. A. G. Monks, 428.

Sidewalks.
See **Roads and Pavements.**

Slag.
Tests of Blast Furnace Slag as the Coarse Aggregate for Concrete. P. J. Freeman, 95.

Slater, W. H.
Discussion, 93.

Smulski, Edward.
Test of the S-M-I System of Flat Slab, 206.

Specifications.
Proposed Revised Specifications for Concrete Sidewalks and Floors, 489.
Proposed Standard Specifications for Fire Tests, 569.
Standards No. 5, 17, 18, 19, 20 (Aug. 30, 1918), 573.

Stucco.
Report of the Committee on Concrete Surfaces, 466.
Tests of Stucco. J. C. Pearson, 109.

Talbot, A. N.
Tests of an Eight-year-old Flat Slab, 192.
Discussion, 291.

Talbot, K. H.
Methods of Constructing Concrete Houses, 408.

Tests.
An Apparatus for the Application of a Uniformly Applied Load. H. H. Scofield, 234.
Effect of Time of Mixing on the Strength and Wear of Concrete. D. A. Abrams, 22.
Fire Tests of Concrete Columns. W. A. Hull, 138,
Moment Coefficients for Flat Slab Design with Results of a Test. W. K. Hatt, 164,
Proposed Standard Specifications for Fire Tests, 569.
Some Tests on Age and Strength of Concrete. H. F. Gonnerman, 101.
Tests of Blast Furnace Slag as Concrete Aggregate. P. J. Freeman, 95.
Test of an Eight-year-old Flat Slab. A. N. Talbot and H. F. Gonnerman, 192.
Tests of the S-M-I System of Flat-Slab Construction. E. Smulski, 206.
Tests of Stucco. J. C. Pearson, 109.

Wason, Leonard C.
Discussion, 136.

Water, Effect on Concrete.
Effect of Time of Mixing on the Strength and Wear of Concrete. D. A. Abrams, 22.

Wig, Rudolph J.
Problems Arising in the Design and Construction of Reinforced-Concrete Ships, 441.